

Title (en)  
METHOD FOR OPTIMIZING COKE PLANT OPERATION AND OUTPUT

Title (de)  
VERFAHREN ZUR OPTIMIERUNG VON BETRIEB UND LEISTUNG EINER VERKOKUNGSANLAGE

Title (fr)  
PROCÉDÉ D'OPTIMISATION DU FONCTIONNEMENT ET DU RENDEMENT D'UNE COKERIE

Publication  
**EP 3186336 B1 20210113 (EN)**

Application  
**EP 15835588 A 20150828**

Priority  
• US 201462043359 P 20140828  
• US 2015047522 W 20150828

Abstract (en)  
[origin: WO2016033511A1] The present technology is generally directed to coal charging systems used with coke ovens. In some embodiments, a coal charging system includes a charging head having opposing wings that extend outwardly from the charging head, leaving an open pathway through which coal may be directed toward side edges of the coal bed. In other embodiments, an extrusion plate is positioned on a rearward face of the charging head and oriented to engage and compress coal as the coal is charged along a length of the coking oven. In other embodiments, charging plates extend outwardly from inward faces of opposing wings.

IPC 8 full level  
**C10B 31/00** (2006.01); **C10B 15/02** (2006.01); **C10B 31/08** (2006.01); **C10B 35/00** (2006.01); **C10B 37/04** (2006.01)

CPC (source: EP KR RU US)  
**C10B 5/00** (2013.01 - KR); **C10B 15/02** (2013.01 - EP KR US); **C10B 21/10** (2013.01 - KR RU); **C10B 21/12** (2013.01 - RU); **C10B 25/02** (2013.01 - KR US); **C10B 31/00** (2013.01 - RU US); **C10B 31/02** (2013.01 - KR US); **C10B 31/06** (2013.01 - US); **C10B 31/08** (2013.01 - EP US); **C10B 31/10** (2013.01 - KR US); **C10B 35/00** (2013.01 - EP US); **C10B 37/02** (2013.01 - EP KR US); **C10B 37/04** (2013.01 - EP KR US); **C10B 39/06** (2013.01 - KR US); **C10B 41/00** (2013.01 - EP US); **C10B 57/02** (2013.01 - KR US); **C10B 57/08** (2013.01 - KR US); **C10B 5/00** (2013.01 - US); **C10B 15/00** (2013.01 - US); **C10B 21/10** (2013.01 - US)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2016033511 A1 20160303**; AU 2015308674 A1 20170316; AU 2015308674 B2 20170713; AU 2015308678 A1 20170316; AU 2015308678 B2 20170629; AU 2015308687 A1 20170316; AU 2015308693 A1 20170323; AU 2015308693 B2 20170629; AU 2020264394 A1 20201203; AU 2022228179 A1 20220929; BR 112017004015 A2 20171205; BR 112017004015 B1 20220118; BR 112017004037 A2 20171205; BR 112017004037 B1 20210518; BR 112017004101 A2 20171205; BR 112017004101 B1 20220524; BR 112017004232 A2 20171212; BR 112017004232 B1 20220419; CA 2959367 A1 20160303; CA 2959367 C 20180220; CA 2959369 A1 20160303; CA 2959369 C 20180313; CA 2959379 A1 20160303; CA 2959618 A1 20160303; CA 2959618 C 20191029; CA 3054519 A1 20160303; CA 3054519 C 20210525; CN 106715650 A 20170524; CN 106715650 B 20180731; CN 106715655 A 20170524; CN 106715655 B 20211026; CN 107075381 A 20170818; CN 107075381 B 20210917; CN 107109237 A 20170829; CO 2017001961 A2 20170531; CO 2017001976 A2 20170519; CO 2017002675 A2 20170609; CO 2017002992 A2 20170620; EP 3186335 A1 20170705; EP 3186335 A4 20180321; EP 3186336 A1 20170705; EP 3186336 A4 20180620; EP 3186336 B1 20210113; EP 3186337 A1 20170705; EP 3186337 A4 20180321; EP 3186337 B1 20180822; EP 3186340 A1 20170705; EP 3186340 A4 20180620; EP 3186340 B1 20210106; JP 2017525823 A 20170907; JP 2017529428 A 20171005; JP 2017529429 A 20171005; JP 2017532401 A 20171102; JP 2018141175 A 20180913; JP 2020041160 A 20200319; JP 2020169335 A 20201015; JP 6208919 B1 20171004; JP 6393828 B2 20180919; JP 6678652 B2 20200408; JP 6683685 B2 20200422; JP 6821000 B2 20210127; JP 6987181 B2 20211222; KR 101821100 B1 20180122; KR 101845209 B1 20180403; KR 101879555 B1 20180717; KR 102442237 B1 20220908; KR 20170046142 A 20170428; KR 20170046143 A 20170428; KR 20170046157 A 20170428; KR 20170048370 A 20170508; PL 3186336 T3 20210531; PL 3186337 T3 20181130; PL 3186340 T3 20210419; RU 2017110046 A 20180928; RU 2017110046 A3 20190219; RU 2643989 C1 20180206; RU 2644461 C1 20180212; RU 2644467 C1 20180212; RU 2697555 C2 20190815; UA 121396 C2 20200525; UA 123493 C2 20210414; UA 123494 C2 20210414; UA 124610 C2 20211020; US 10233392 B2 20190319; US 10308876 B2 20190604; US 10920148 B2 20210216; US 11053444 B2 20210706; US 11441078 B2 20220913; US 2016060532 A1 20160303; US 2016060533 A1 20160303; US 2016060534 A1 20160303; US 2016060536 A1 20160303; US 2017253804 A1 20170907; US 2019352568 A1 20191121; US 2020157430 A1 20200521; US 2021163822 A1 20210603; US 9580656 B2 20170228; US 9708542 B2 20170718; US 9976089 B2 20180522; WO 2016033515 A1 20160303; WO 2016033524 A1 20160303; WO 2016033530 A1 20160303; ZA 201701787 B 20180530

DOCDB simple family (application)  
**US 2015047511 W 20150828**; AU 2015308674 A 20150828; AU 2015308678 A 20150828; AU 2015308687 A 20150828; AU 2015308693 A 20150828; AU 2020264394 A 20201106; AU 2022228179 A 20220909; BR 112017004015 A 20150828; BR 112017004037 A 20150828; BR 112017004101 A 20150828; BR 112017004232 A 20150828; CA 2959367 A 20150828; CA 2959369 A 20150828; CA 2959379 A 20150828; CA 2959618 A 20150828; CA 3054519 A 20150828; CN 201580049825 A 20150828; CN 201580049832 A 20150828; CN 201580050658 A 20150828; CN 201580058064 A 20150828; CO 2017001961 A 20170228; CO 2017001976 A 20170228; CO 2017002675 A 20170322; CO 2017002992 A 20170328; EP 15835588 A 20150828; EP 15836056 A 20150828; EP 15836082 A 20150828; EP 15836657 A 20150828; JP 2017511644 A 20150828; JP 2017511645 A 20150828; JP 2017511646 A 20150828; JP 2017511657 A 20150828; JP 2018117023 A 20180620; JP 2019224041 A 20191211; JP 2020109938 A 20200625; KR 20177005503 A 20150828; KR 20177005692 A 20150828; KR 20177005693 A 20150828; KR 20177007766 A 20150828; PL 15835588 T 20150828; PL 15836056 T 20150828; PL 15836082 T 20150828; RU 2017109941 A 20150828; RU 2017109970 A 20150828; RU 2017110017 A 20150828; RU 2017110046 A 20150828; UA A201702646 A 20150828; UA A201702648 A 20150828; UA A201702650 A 20150828; UA A201702656 A 20150828; US 2015047522 W 20150828; US 2015047533 W 20150828; US 2015047542 W 20150828; US 201514839384 A 20150828; US 201514839493 A 20150828; US 201514839551 A 20150828; US 201514839588 A 20150828; US 201715443246 A 20170227; US 201916251352 A 20190118; US 201916428014 A 20190531; US 202117155719 A 20210122; ZA 201701787 A 20170313